

WE CLAIM:

1. A thermal head printer for printing but not perforating a substantially light-insensitive thermographic material, said thermal printer said thermographic material and comprising:
 - a transport system having a transport direction,
 - n thermal heads, where n is an integer,each of said thermal heads comprising an array of substantially rectangular energizable heating elements, said heating elements having a length L_n in said transport direction and a pitch P_n between adjacent heating elements, and
 - a means for supplying electrical energy to each of said substantially rectangular energizable heating elements in at least one of said thermal heads,
 - said transport system being capable of transporting said light-insensitive thermographic material in contact or proximity with at least one of said thermal heads,wherein at least one of said thermal heads comprises heating elements for which L_n/P_n is between 0.25 and 0.88.
2. Thermal head printer according to claim 1, wherein said thermal head printer comprises a replaceable thermal head or set of thermal heads.
3. Thermal head printer according to claim 1, wherein said thermal head printer comprises at least two thermal heads, configured such that a first thermal head can be replaced by an nth thermal head while being capable of maintaining a comparable image tone with said substantially light-insensitive thermographic material.
4. Thermal head printer according to claim 1, wherein said substantially rectangular heating element is a split resistor.
5. A process for printing a substantially light-insensitive thermographic material with a thermal head printer for printing but not perforating a substantially light-insensitive thermographic material, said thermal printer said thermographic material and comprising:
 - a transport system having a transport direction,
 - n thermal heads, where n is an integer,

each of said thermal heads comprising an array of substantially rectangular energizable heating elements, said heating elements having a length L_n in said transport direction and a pitch P_n between adjacent heating elements, and

- 5 - a means for supplying electrical energy to each of said substantially rectangular energizable heating elements in at least one of said thermal heads,
 - said transport system being capable of transporting said light-insensitive thermographic material in contact or proximity
10 with at least one of said thermal heads,
 wherein at least one of said thermal heads comprises heating elements for which L_n/P_n is between 0.25 and 0.88, comprising the steps of: choosing a thermal head, providing said substantially light-insensitive thermographic material,
15 transporting said substantially light-insensitive thermographic material past said thermal head, and image-wise heating of said substantially light-insensitive thermographic material by supplying electrical energy to said heating elements.
- 20 6. Process according to claim 5, wherein said thermal head printer comprises a replaceable thermal head or set of thermal heads.
7. Process according to claim 5, wherein said thermal head printer comprises at least two thermal heads, configured such that a
25 first thermal head can be replaced by an n th thermal head while being capable of maintaining a comparable image tone with said substantially light-insensitive thermographic material.
8. Process according to claim 5, wherein said substantially
30 rectangular heating element is a split resistor.
9. A second process for printing a substantially light-insensitive thermographic material at different printing speeds with a thermal head comprising heating elements without significant
35 variation in image tone, wherein the length of said heating elements in the transport direction of said substantially light-insensitive thermographic material decreases with decreasing printing speed.
- 40 10. A third process for printing a substantially light-insensitive thermographic material at different printing speeds with a different thermal head at each printing speed without

significant variation in image tone, wherein each of said different thermal heads comprises heating elements with a different length in the transport direction of said substantially light-insensitive thermographic material and said
s length of said heating elements in the transport direction of said substantially light-insensitive thermographic material decreases with decreasing printing speed.